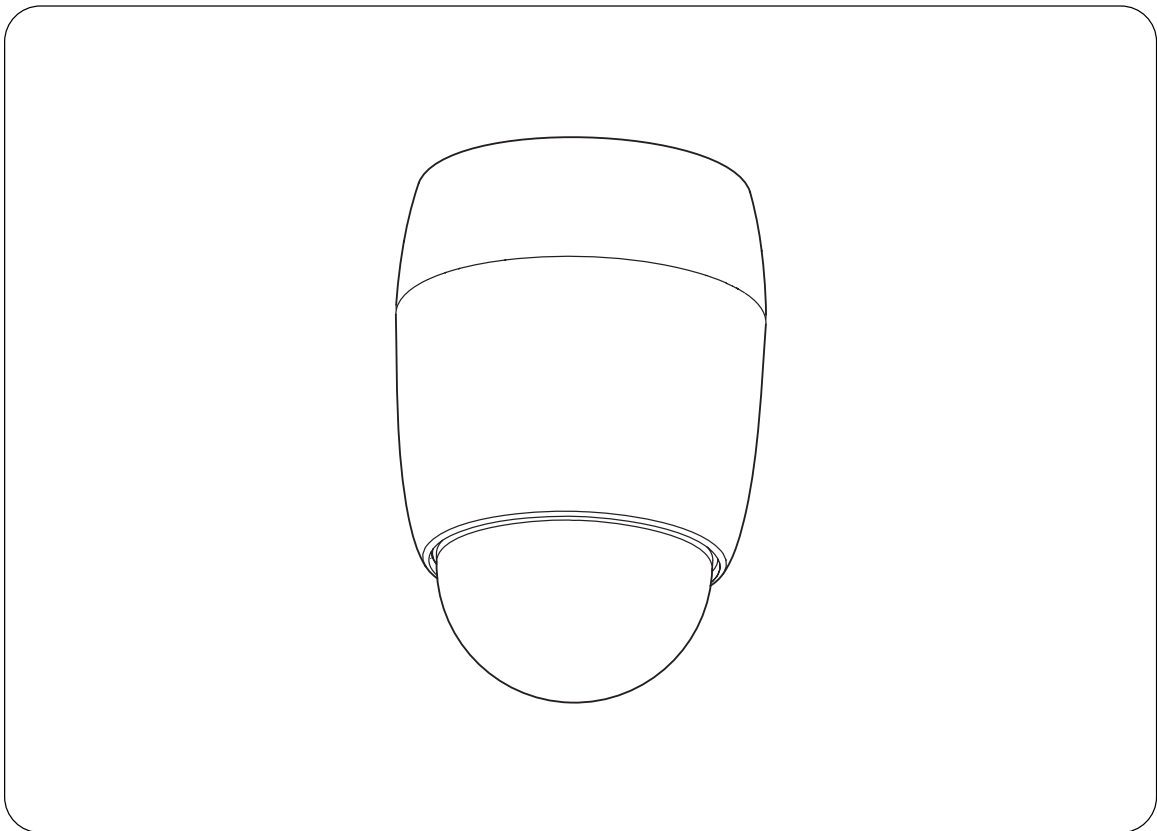




INSTRUCTION MANUAL

**NETWORK
COMBINATION DOME CAMERA**

N-CC2564



Thank you for purchasing TOA's Network Combination Dome Camera. Please carefully follow the instructions in this manual to ensure long, trouble-free use of your equipment.

TOA Corporation

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1. SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use.
- Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.
- We also recommend you keep this instruction manual handy for future reference.

Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety hazards.



WARNING

Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.



WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.

When Installing the Unit

- This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Avoid installing the unit in unstable locations, such as on a rickety or slanted surface. Failure to do so may result in the unit falling and possibly causing personal injury.
- Install the unit only in a location that can structurally support the weight of the unit and the mounting bracket. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.
- Only use the unit's dedicated mounting hardware. The use of mounting hardware not designated could result in the unit falling and possibly causing personal injury.
- Do not use other methods than specified to install the unit. Extreme force is applied to the unit and the unit could fall off, possibly resulting in personal injuries.
- Attach the safety wire to the unit. If not attached, the unit could fall off, resulting in personal injury.
- Use nuts and bolts that are appropriate for the ceiling's or wall's structure and composition. Failure to do so may cause the unit to fall, resulting in material damage and possible personal injury.
- Tighten each nut and bolt securely. Ensure that the bracket has no loose joints after installation to prevent accidents that could result in personal injury.
- Avoid installing the unit in locations exposed to sea breeze or corrosive gas. Mounts may become corroded, eventually causing the unit to fall off, which could result in personal injury.
- Do not mount the unit in locations exposed to constant vibration. The mounting screws and/or bolts may be loosened by excessive vibration, potentially causing the unit to fall, which could result in personal injury.

When the Unit is in Use

- If any of the following irregularities occurs, immediately unplug the power plug from the AC outlet and inform the shop from where the unit was purchased. Further using the unit may result in fire or electric shock.
 - If you detect smoke or a strange smell coming from the unit.
 - If water or any metallic object gets into the unit
 - If the unit falls, or the unit case breaks
 - If the power supply cord is damaged (exposure of the core, disconnection, etc.)
 - If no camera images are displayed on the monitor TV when the temperature of the camera unit is 0°C or more.
- To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest TOA dealer.
- Do not insert, or drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.
- Do not touch the unit during thunder and lightning, as this may result in electric shock.



CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.

When Installing the Unit

- To avoid electric shocks, be sure to switch off the power before power supply wiring work. Failure to do so may result in electrical shock.
- Leave the installation of the unit to your TOA dealer because the installation requires expert experience and skills. If the unit falls, this could cause personal injuries.

When the Unit is in Use

- Do not stand or sit on, nor hang down from the unit as this may cause it to fall down or drop, resulting in personal injury and/or property damage.
- Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for a long period of time. Doing otherwise may cause a fire, burn injury or electric shock.
- Have the unit checked periodically by the shop from where it was purchased. Failure to do so may result in corrosion or damage to the unit or its mounting brackets that could cause the unit to fall, possibly causing personal injury.
- Contact your TOA dealer as to the cleaning. If dust is allowed to accumulate in the unit over a long period of time, a fire or damage to the unit may result.

CU version complies with Part 15 of the FCC Rules.

Note

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Modifications

Any modifications made to this device that are not approved by TOA Corporation may void the authority granted to the user by the FCC to operate this equipment.

2. LIST OF INCLUDED COMPONENTS AND PARTS

Check to be sure that the following components and parts are contained in the package:

Safety wire	1
Camera mounting screw (M4 x 8)	4
Category5 shielded coupler (female to female)	1
Extension connector (alarm input, AUX Contact output)	each 1
CD-ROM (Software decoder : N-SD2000, Manual (PDF))	1
Network Combination Dome Camera Installation Manual	1
Software License Agreement	1
Network Camera System Installation Guide	1

Note

The CD-ROM contains the Software Decoder, Software Decoder's Instruction Manual, Setting Manual, N-DR2000 Status Monitoring Software, Instruction Manual and Installation Guide for N-DR2000 Status Monitoring Software, Firmware, Adobe Acrobat Reader and DirectX.

3. GENERAL DESCRIPTION

The N-CC2564 Network Combination Dome Camera can be connected directly to a LAN (10BASE-T/100BASE TX). Since it can simultaneously transmit MPEG-4 and JPEG data, smooth moving images can be monitored and high-definition still images can be monitored and recorded. The N-CC2564 can transmit sub-band ADPCM or PCM quality voice.

TOA's dome-type color cameras combine with a high-speed camera drive that permits one 360-degree horizontal rotation per second and a 23 times optical zoom lens. Up to 255 arbitrary positions can be preset and such preset positions can be instantaneously repeated.

4. FEATURES

- Digital signal processing realizes high resolution and high picture quality. The unit also features the video memory that increases the electronic sensitivity up to 32 times and enables electronic zooming.
- The supplied software decoder permits the images to be monitored via the network.
- It is also equipped with Timer, Motion Detection, Auto-flip, Wide Dynamic, Black & White mode, 12 times Electronic Zooming and Privacy Masking functions

5. HANDLING PRECAUTIONS

- Noise may appear on the monitor or preset camera positions may deviate with prolonged camera use. In such cases, use the camera's refresh function to automatically refresh settings and reestablish the home position once a day or week, thus allowing any position deviation to be corrected. When correcting manually, display the menu screen using the software decoder and execute "Initialize" on the "Maintenance" items.
- It is recommended that the unit be installed in locations where the temperature is under +40°C, as the longevity of the unit may reduce with prolonged unit use under high temperature and high humidity.
- Do not direct the camera lens to the sun or strong lighting or light reflection. Exposure to direct sunlight could cause the CCD's color filter to deteriorate, leading to image discoloration.
- Do not install the unit in locations exposed to constant vibration. The unit is not intended for vehicle use. Do not install the unit in a vehicle or ship.
- Do not give vibration or shock to the unit, as doing so may cause unit breakdown, or damage.
- Avoid installing the unit on sea or shore, or in locations exposed to dust or corrosive gas, or extraordinary combustible conditions, or in swimming pools where disinfectants are used.
- To prevent the unit falls off, be sure to hang the supplied safety wire first when installing the unit.
- The dome camera is designed solely for suspended installations. The camera or dome must be suspended vertically with its dome facing downward. Use special care not to suspend it at a tilted angle.
- Shielded (STP) network cables must be used with this unit to ensure compliance with EMC standards.
- The unit is not equipped with a power switch. Perform power construction work so that the camera power can be turned on and off remotely.
- The dome camera features built-in heat generating circuitry. Take care not to touch the internal parts marked "Caution High Temperature" when working inside the camera during dome cleaning or maintenance.

- Installing the camera cables in close proximity to fluorescent lamps or other electrical appliances can downgrade the picture quality.
- If there is a strong electric or magnetic field near the camera, such as television transmission antennas, motors or transformers, this may distort or roll the monitor picture. In such cases, run the entire wiring route through metal conduit tubing.
- Before applying the power to the camera, be sure to complete all connections between the camera and related equipment.
- Avoid directly touching the dome surface, since camera picture quality could deteriorate if the dome cover becomes smudged and dirty.
- To clean, be sure to first unplug the power plug from the AC outlet, then wipe with a dry cloth. When the unit gets very dirty, use a cloth dampened in a neutral detergent. Never use benzene, thinner or chemically processed towel as the unit's plastic or other parts may be deformed or discolored.
- When cleaning the dome cover, wipe lightly with a soft cloth. In this event, the cover could be scratched and damaged if the dome is covered in dust or sand. When the cover is extremely dirty, it is highly recommended that the cover be removed and that its outside surface be washed lightly with water. Since alcohol-based detergents can turn the dome cover whitish, avoid using them, as camera picture quality could be severely affected.
- When dust has settled on the unit's lens, lightly clean using a commercial camera blower or cleaning paper.
- Install cables so as to prevent their damage and provide ample cable slack if they need to be stretched taut.
- The IP address, subnet mask and gateway IP address must be set.
- Transmission to multiple receivers using the unicast function could result in a reduction in the frame rate.
- When using the multicast function, the network must be compatible with the multicast system.
- When a connection is established between the transmitter and multiple receivers, if the data rate requested by each receiver differs, the transmission will be limited to the minimum set data rate.
- In transmission streaming mode, data is constantly transmitted from transmitter to network even when no communications are performed between the two.
- Personal computers running Microsoft Windows XP are required when performing initial settings for the Network Combination Dome Camera.
- TOA's software decoder does not support Macintosh or Unix operating systems.

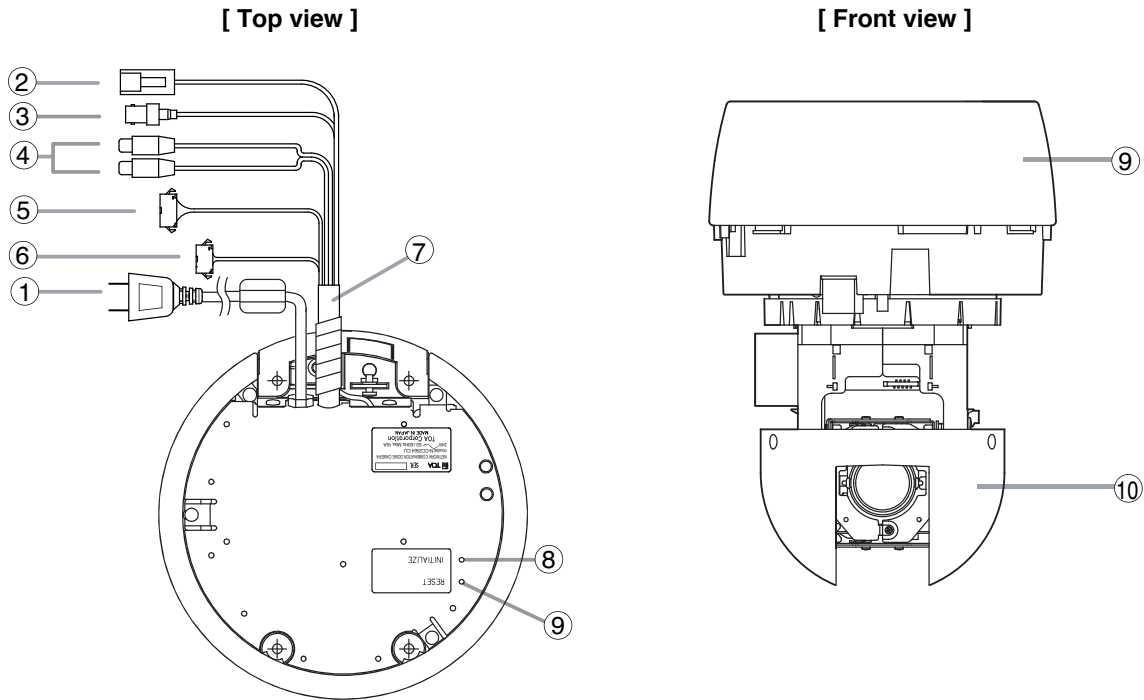
MPEG-4 visual patent portfolio license

With respect to a Licensee offering MPEG-4 Video Decoders and/or Encoders the following notice shall be given:

THIS PRODUCT IS LICENSED UNDER THE MPEG-4 VISUAL PATENT PORTFOLIO LICENSE FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER FOR (1) ENCODING VIDEO IN COMPLIANCE WITH THE MPEG-4 VISUAL STANDARD ("MPEG-4 VIDEO") AND/OR (2) DECODING MPEG-4 VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR WAS OBTAINED FROM A VIDEO PROVIDER LICENSE BY MPEG LA TO PROVIDE MPEG-4 VIDEO. NO LICENSE IS GRANTED OR SHALL BE IMPLIED FOR ANY OTHER USE. ADDITIONAL INFORMATION INCLUDING THAT RELATING TO PROMOTIONAL, INTERNAL AND COMMERCIAL USES AND LICENSING MAY BE OBTAINED FROM MPEG LA, LLC.

SEE [HTTP://WWW.MPEGLA.COM](http://www.mpeg-la.com).

6. NOMENCLATURE



(1) Power Cable

Connects to the power supply.

(2) Network Terminal (10BASE-T/100BASE-TX)

Connects to the 10BASE-T/100BASE-TX using the supplied LAN adapter.

(3) Video Output Terminal (VIDEO OUT)

Outputs the Video signals.

(4) Audio Input Terminal (red) / Audio Output Terminal (white)

These terminals are comprised of a terminal that receives line level signals and a terminal that outputs signals received via a network.

(5) Alarm Input Terminal

Used to receive alarm signals from sensors, etc.

(6) Contact Output Terminal

• **Contact Output N1, N2**

This open collector output allows the external device connected to this terminal to control other connected equipment via a network, depending on the network settings.

• **Contact Output 1 (AUX1)**

This open collector output allows the external device connected to this terminal to control other connected equipment, depending on the camera settings.

• **Contact Output 2 (AUX2)**

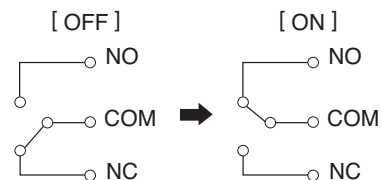
This relay contact output controls its connected external device, depending on the camera settings.

	OFF	ON
NO - COM	Open	Short
NC - COM	Short	Open

Rated maximum allowable voltage : 30 V DC

Maximum allowable current: 1 A

Contact life: 100,000 times



(7) Composite Cable

Cables from terminals (2)-(6) are merged into this composite cable.

(8) Initialization Switch (INITIALIZE)

Used to initialize the network settings.

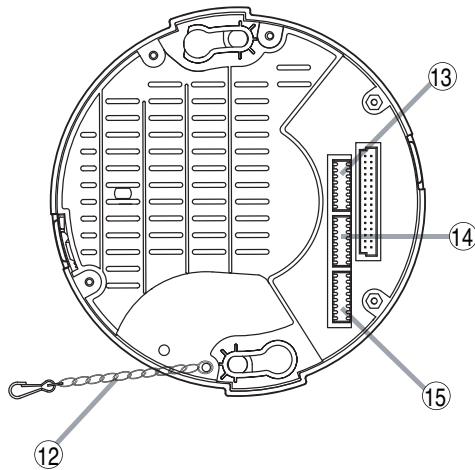
(9) Reset Switch (RESET)

Used to restart the camera.

(10) Base Unit

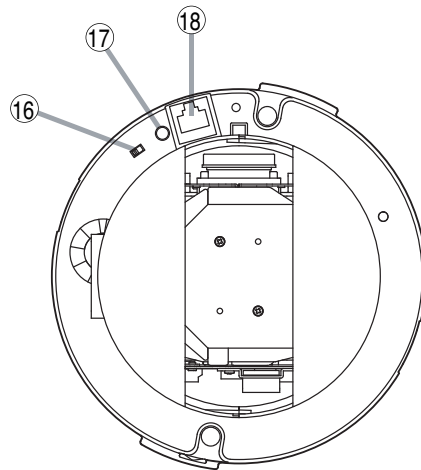
(11) Camera Unit

[Top view of Camera Unit]



- (12) **Safety Wire**
Connects to the base unit.
- (13) **DIP Switch (SW1)**
Not used.
- (14) **DIP Switch (SW2)**
Used to perform various settings of the camera.
(Refer to p. 32; DIP Switch Settings.)

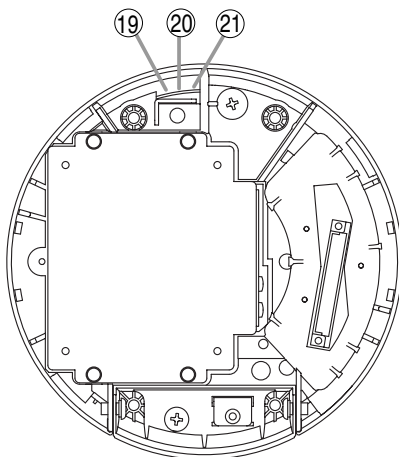
[Bottom view of Camera Unit]



- (15) **DIP Switch (SW2)**
Used to perform various settings of the camera.
(Refer to p. 32; DIP Switch Settings.)
- (16) **COM SW ***
- (17) **COM LED ***
- (18) **COM PORT ***

* Parts (16)–(18) are for maintenance purposes (firmware update) only. Avoid using these parts in normal use.

[Bottom view of Base Unit]



- (19) **READY LED (Green)**
Flashes quickly when the camera is in initial operation mode, and lights continuously while the camera is operating. This LED also flashes slowly during firmware rewrite.
- (20) **BUSY LED (Yellow)**
Flashes during communications.
- (21) **ERROR LED (Red)**
Lights when a failure occurs and camera operation stops. This LED extinguishes when the camera is automatically restarted.

7. PRECAUTIONS WHEN INSTALLING THE UNIT

WARNING

The Combination Dome Camera weight 2.0 kg. Select the heavy-duty mounting surface that can structurally support the weight of the camera. Doing otherwise may result in the unit falling and possibly causing personal injury.

Notes

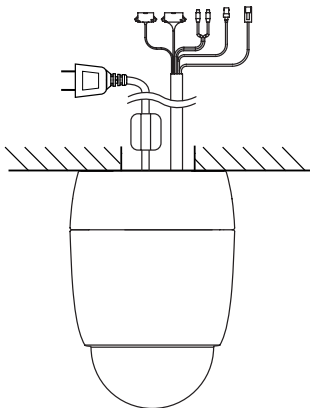
- Mount the camera to a heavy-duty ceiling surface (such as concrete ceiling).
- When mounting directly to the ceiling (such as a double ceiling) not strong enough to support the weight of the mounted camera, use the optional C-BC511A Ceiling Mounting Bracket.
- When installing the camera in the ceiling to hide it as much as possible, use the optional C-BC511U or C-BC511U-S Flush Ceiling Mounting Bracket.
- When hanging the camera from the ceiling, use the optional C-BC511P Ceiling Suspension Bracket.
- When mounting the camera to a wall, use the optional C-BC511W Wall Mounting Bracket.

8. DIRECT CEILING MOUNTING

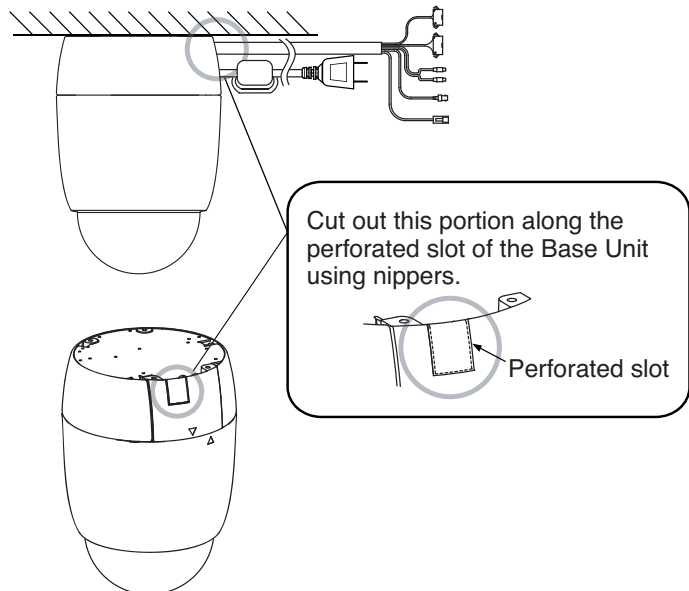
Use the C-BC511C or C-BC511C-S Ceiling Mounting Cover.

8.1. Mounting Example

[Cable routing to the attic]



[Cable routing over the ceiling surface]



8.2. Mounting Procedures

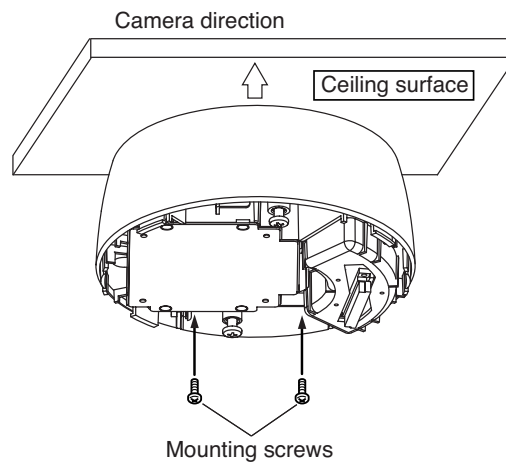
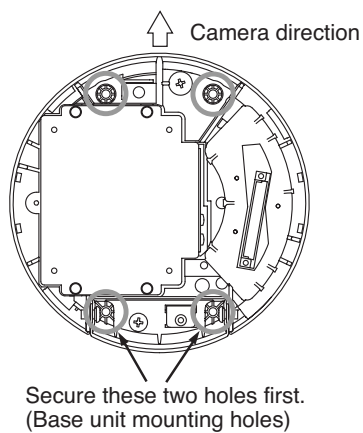
1. Mount the base unit to the ceiling.

First fix two of the base unit mounting holes as shown below.

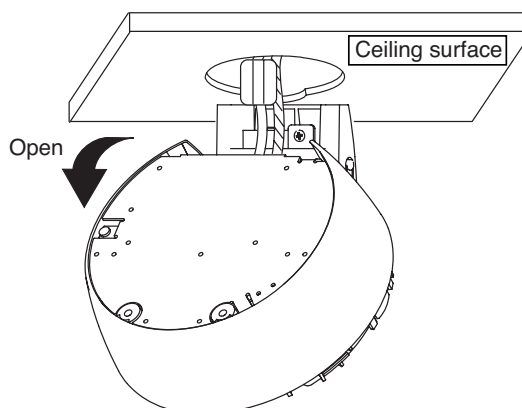
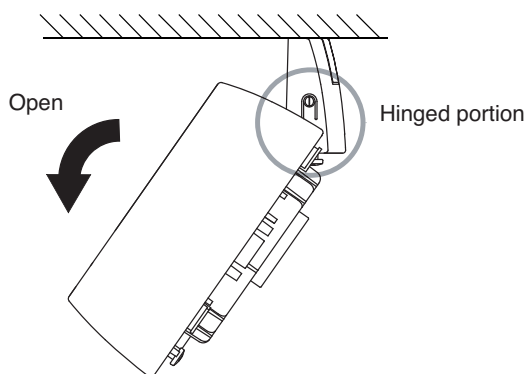
Since no mounting screws are supplied with the camera, prepare them separately.

Use screws with a nominal diameter of 4 mm and a length of over 25 mm.

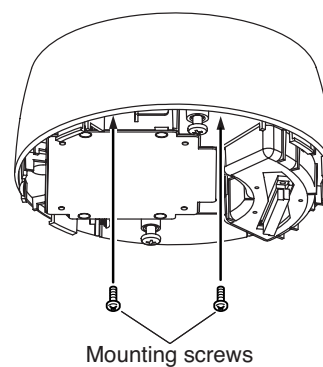
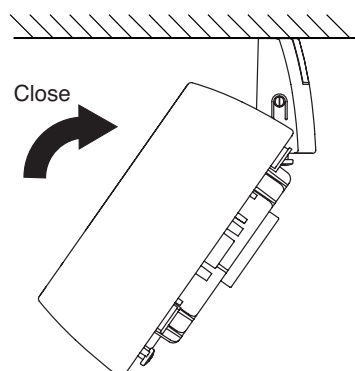
Note: When routing cables over the ceiling surface, securely fix all 4 of the base unit mounting holes to the ceiling.



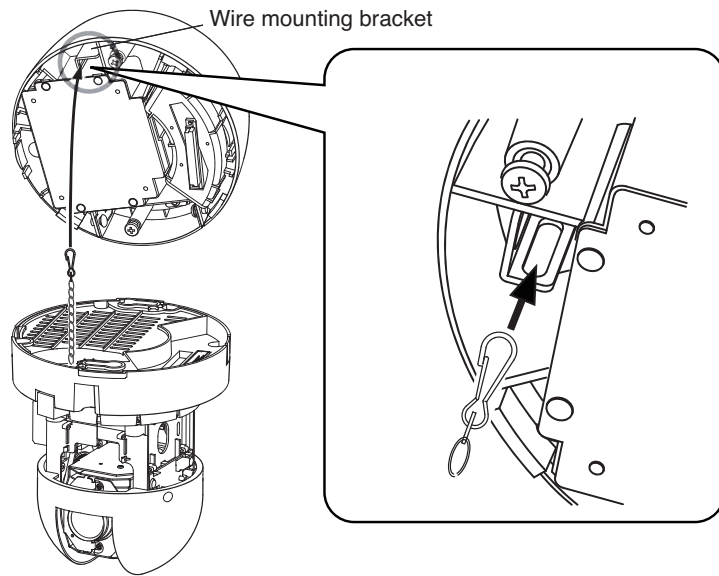
2. Release the lock on the hinged portion of the base unit, and connect the composite cable and power cable to the base unit. (For details, please refer to p. 30; "CONNECTIONS.")



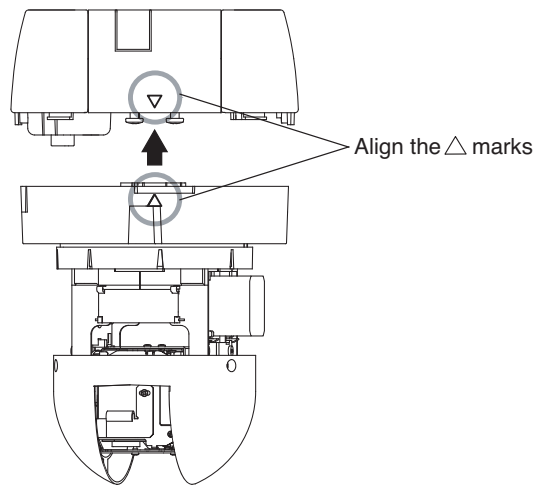
3. Push up and lock the hinged portion of the base unit and secure the remaining two mounting holes.



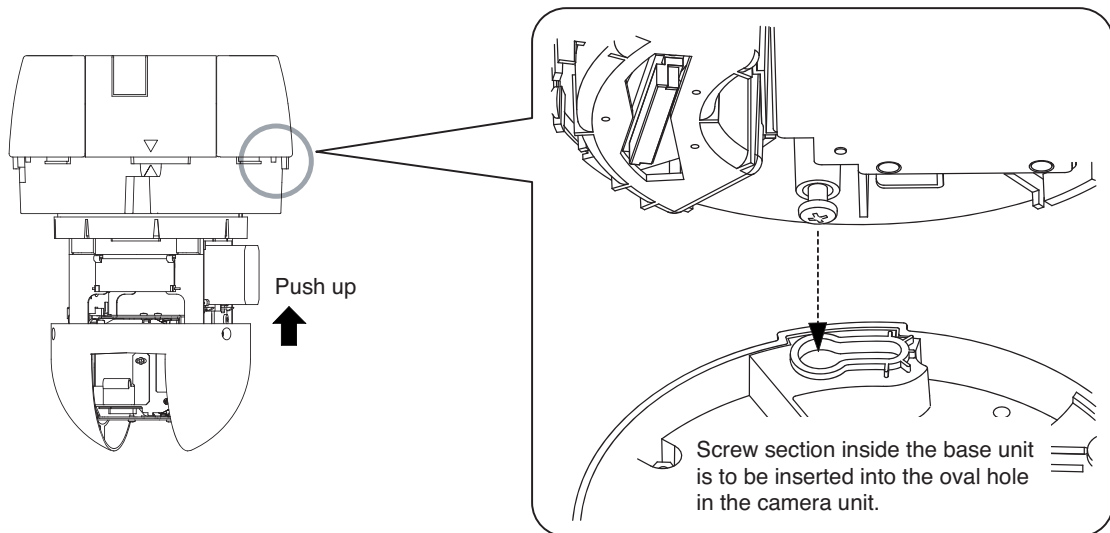
4. Perform DIP SW settings on the camera unit.
(For details, please refer to p. 32; "DIP Switch Settings.")
5. Attach the safety wire from the camera unit to the wire mounting hole of the base unit.



6. Align the positioning mark on the base unit with that on the camera unit.



7. Align the positioning marks, then push the camera unit up into the base unit.

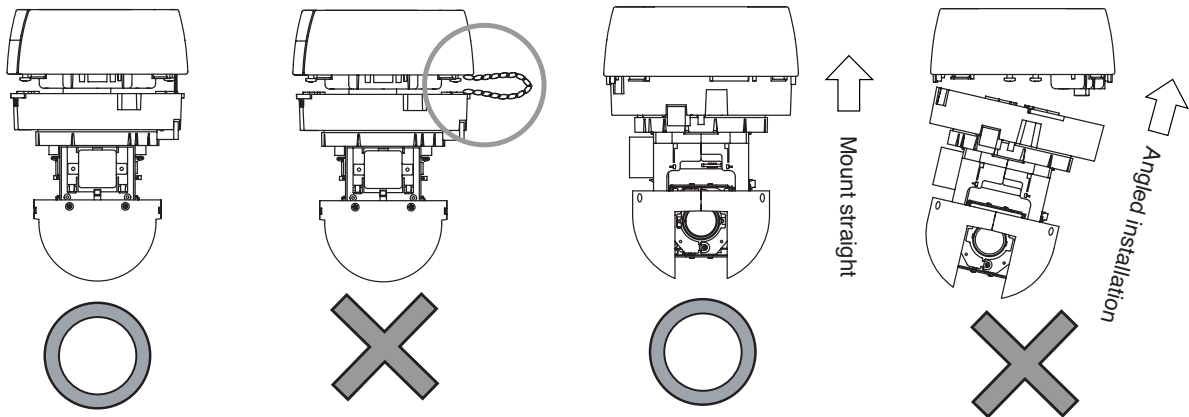


Note

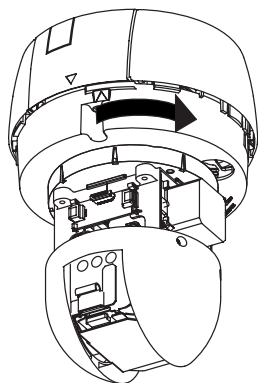
Take care not to pinch the safety wire between the camera unit and base unit to avoid damage to the camera.

Note

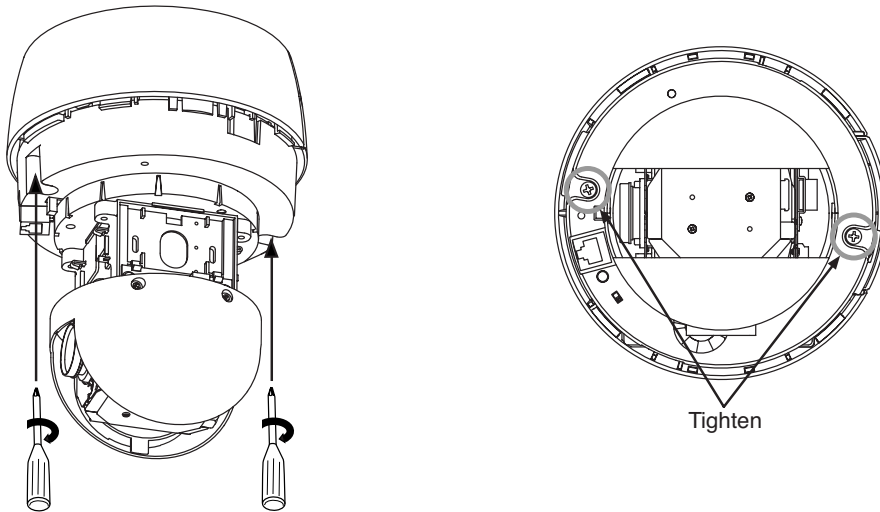
When mounting the camera unit to the base unit, mount it straight till it is attached to the base unit correctly. Mounting it at an angle may cause damage to the camera unit.



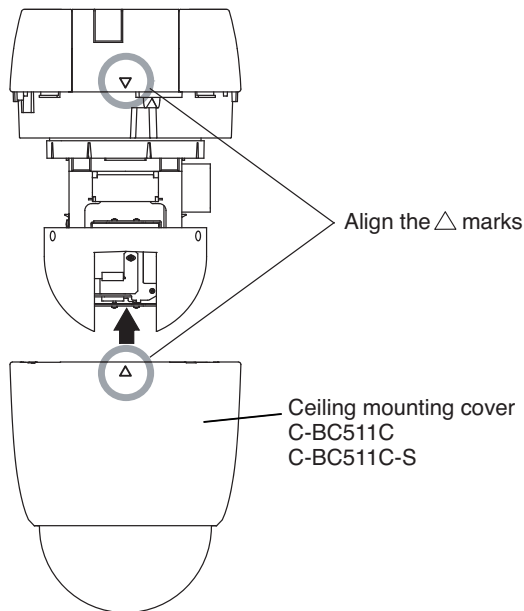
8. Turn the camera unit clockwise pushing it up to the base unit until it locks into place.



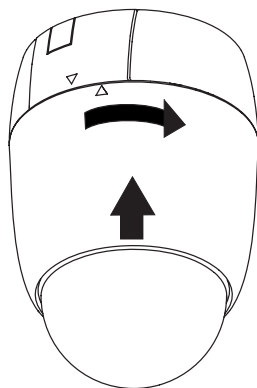
9. Tighten 2 camera unit mounting screws.



10. Align the positioning mark on the ceiling mounting cover with that on the base unit.



11. Turn the ceiling mounting cover clockwise pushing it up to the base unit until it locks into place.

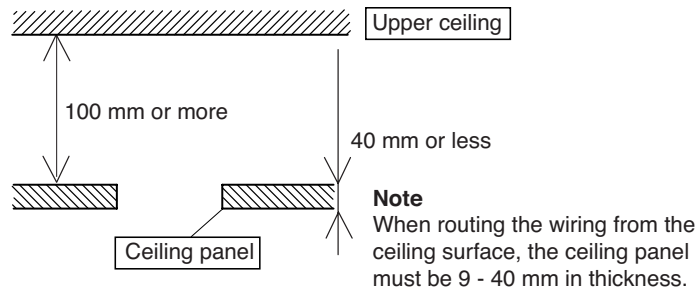


9. MOUNTING THE CAMERA TO A WEAK CEILING PANEL

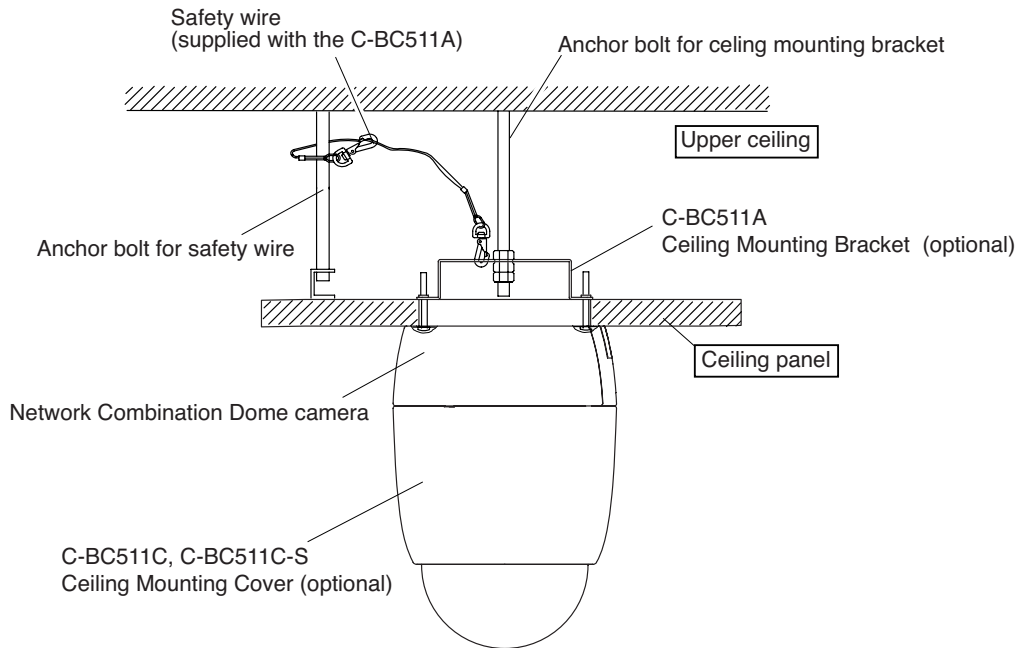
Use the optional C-BC511C or C-BC511C-S Ceiling Mounting Cover and the optional C-BC511A Ceiling Mounting Bracket.

Notes

- Use the cover and the anchor whenever the space between suspended ceiling panel and upper ceiling exceeds a height of 100 mm.
- The ceiling panel to which the camera will be mounted must be 9 - 40 mm in thickness.
- Be sure to use the supplied safety wire.
- Be sure to use the specified screws to mount the Network Combination Dome Camera and direct mounting anchor, and ensure that they are securely mounted without any play.



9.1. Mounting Example

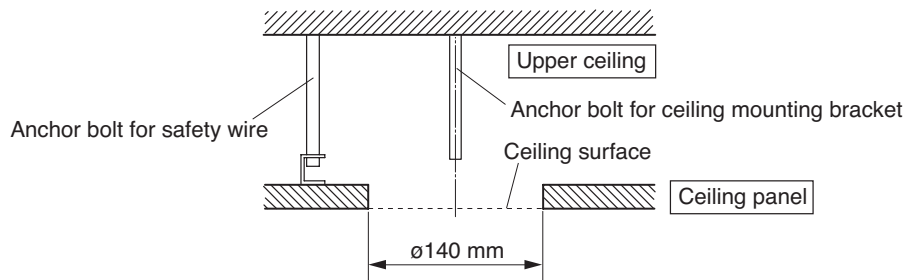


9.2. Mounting Procedures

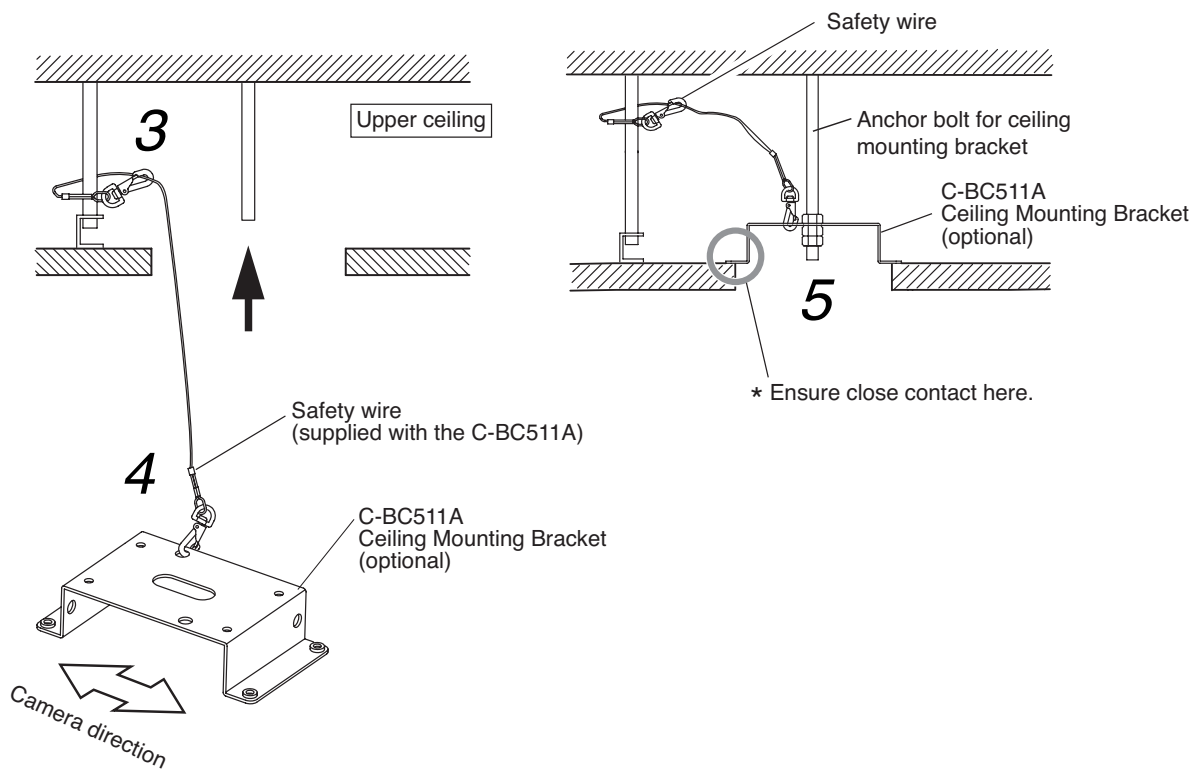
1. Make a mounting hole of $\varnothing 140$ mm in the ceiling panel.
2. Install the anchor bolt for ceiling mounting bracket and anchor bolt for safety wire into the upper ceiling.

Notes

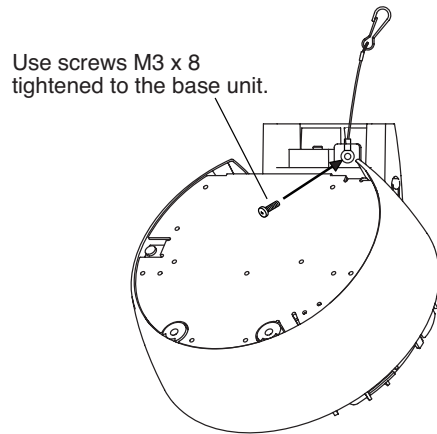
- The anchor bolt for ceiling mounting bracket must be aligned with the center of the mounting hole of $\varnothing 140$ mm in the ceiling panel, and must not project from the ceiling surface.
- If an existing anchor bolt is available nearby, it can be substituted for the anchor bolt for safety wire.



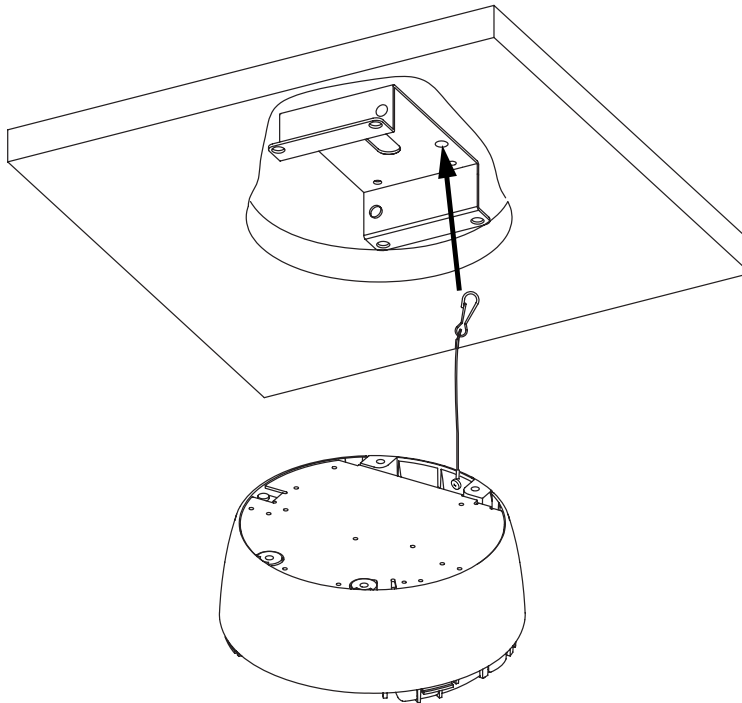
3. Attach the supplied safety wire to the anchor bolt for safety wire.
4. Attach the ceiling mounting bracket to the end of the safety wire.
5. Attach the ceiling mounting bracket to the anchor bolt for ceiling mounting bracket.



6. Attach the supplied safety wire to the base unit.



7. Attach the safety wire connected to the base unit to the ceiling mounting bracket.



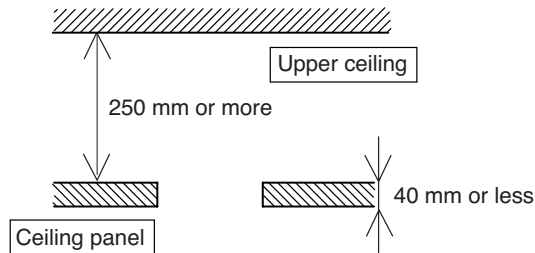
8. For subsequent procedures, follow the steps 1 – 11 on p. 10 – 13.

10. FLUSH CEILING MOUNTING

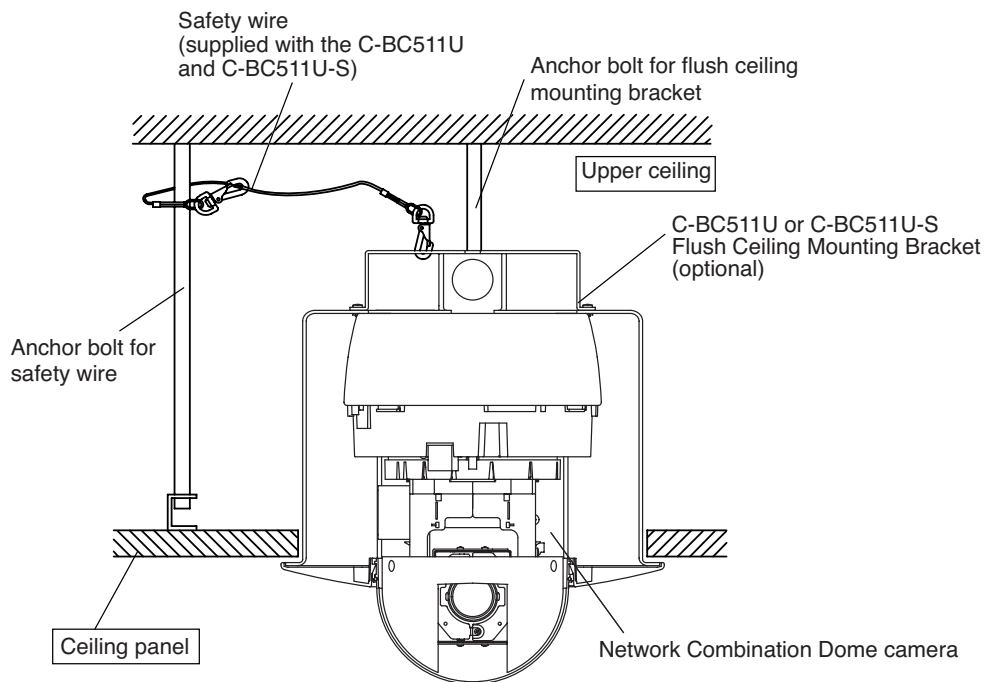
- Use the optional C-BC511U or C-BC511U-S Flush Ceiling Mounting Bracket.
- Flush mounting can be used to reduce the camera's exposed area. Use the optional C-BC511U or C-BC511U-S Flush Ceiling Mounting Bracket when mounting cameras to gypsum board ceilings or other weak ceiling panel materials in which mounting screws cannot be securely inserted.

Notes

- Use the bracket whenever the space between suspended ceiling panel and upper ceiling exceeds a height of 250 mm.
- The ceiling panel to which the camera will be mounted must be no more than 40 mm in thickness.
- Be sure to use the supplied safety wire.
- Be sure to use the specified screws to mount the Network Combination Dome Camera and flush ceiling mounting bracket, and ensure that they are securely mounted without any play.

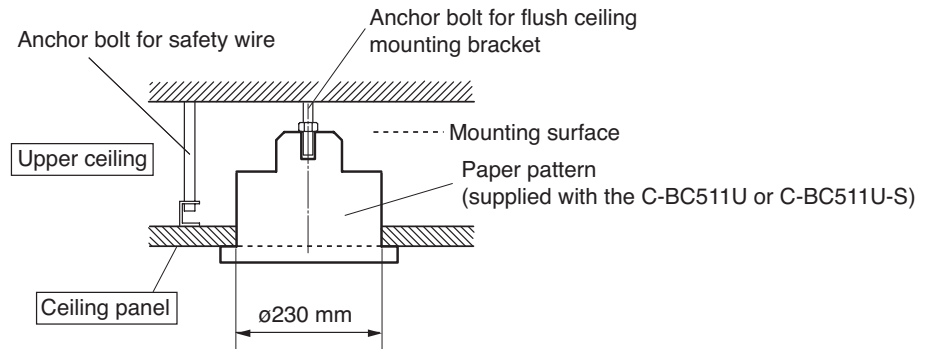


10.1. Mounting Example

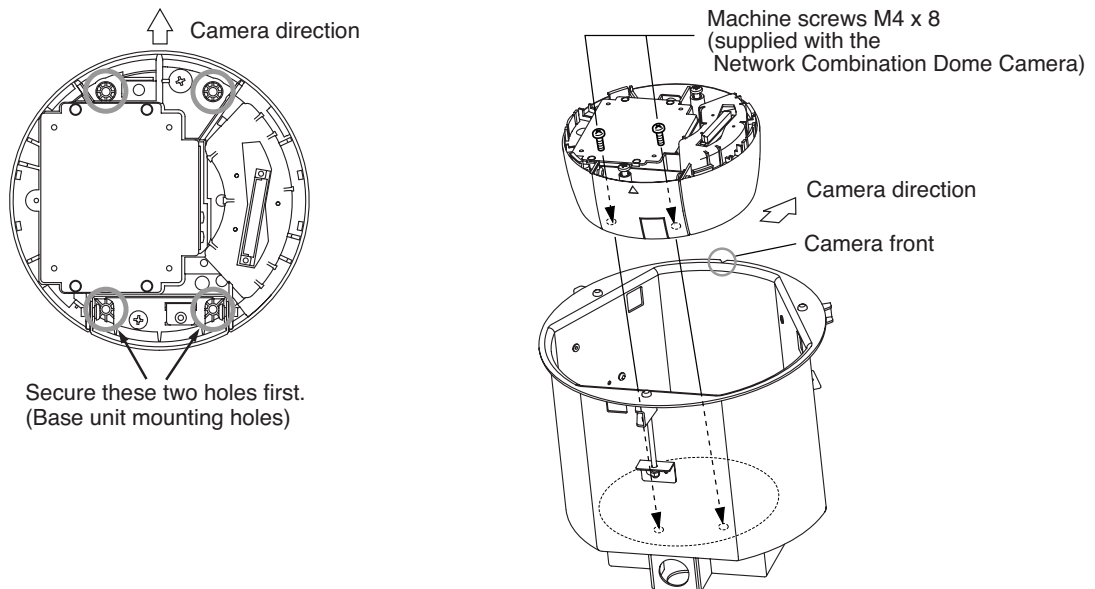


10.2. Mounting Procedures

1. Make a mounting hole of $\varnothing 230$ mm in the ceiling panel.
2. Install the anchor bolt for flush ceiling mounting bracket and anchor bolt for safety wire into the upper ceiling.
 - The anchor bolt for flush ceiling mounting bracket must be aligned with the center of mounting hole of $\varnothing 230$ mm in the ceiling panel.
 - Use the pattern paper supplied with the C-BC511U or C-BC511U-S bracket to determine the anchor bolt length and mounting surface height.
 - If an existing anchor bolt is available nearby, it can be substituted for the anchor bolt for safety wire.

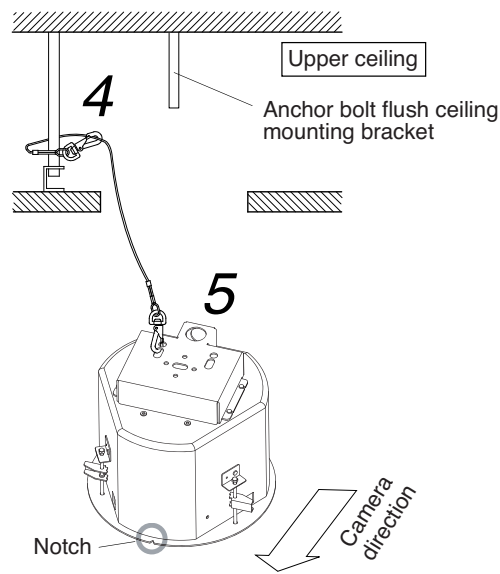


3. Attach the base unit to the flush ceiling mounting bracket.
First fix two of the base unit mounting holes as shown below.
(Use the machine screws supplied with the Network Combination Dome Camera.)

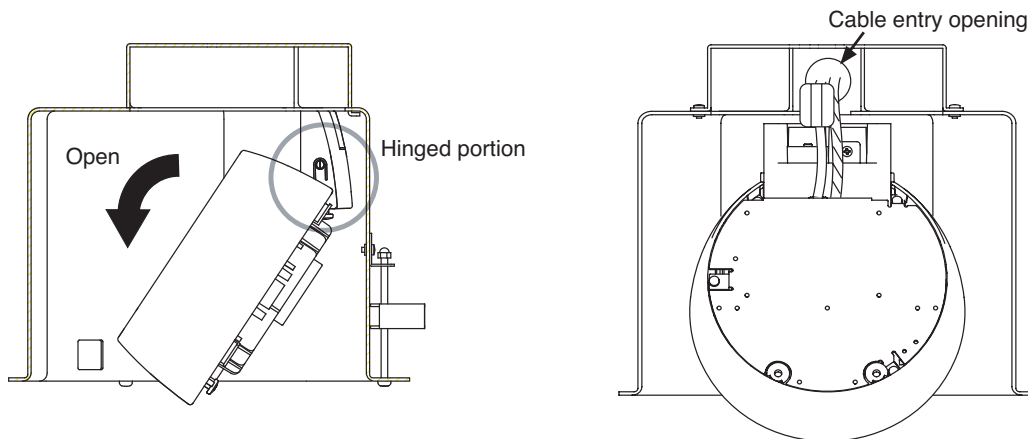


Note: Route the cables from flush ceiling mounting bracket.

4. Attach the supplied safety wire to the anchor bolt for safety wire.
5. Attach the flush ceiling mounting bracket to the end of safety wire.



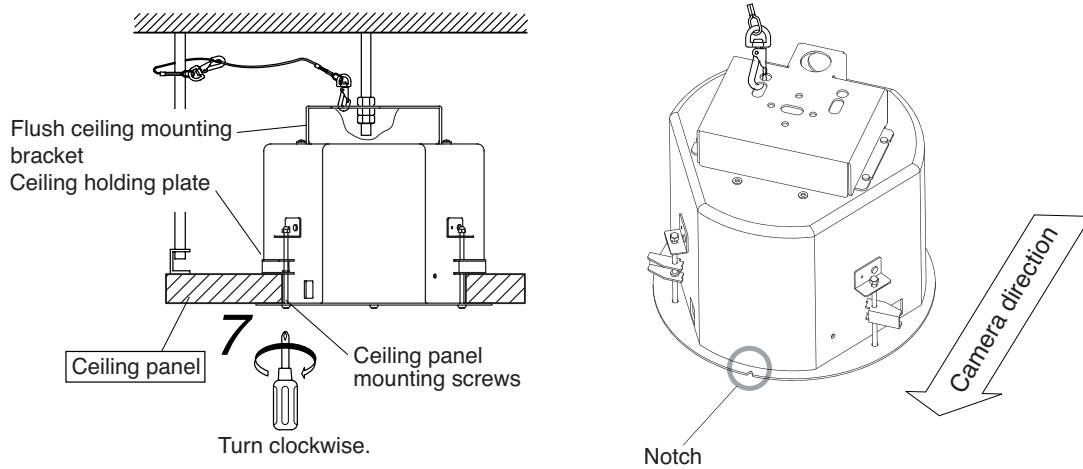
6. Release the lock on the hinged portion of the base unit and connect the composite cable and power cable extending from the base unit. (For details, please refer to p. 30; "CONNECTIONS.")



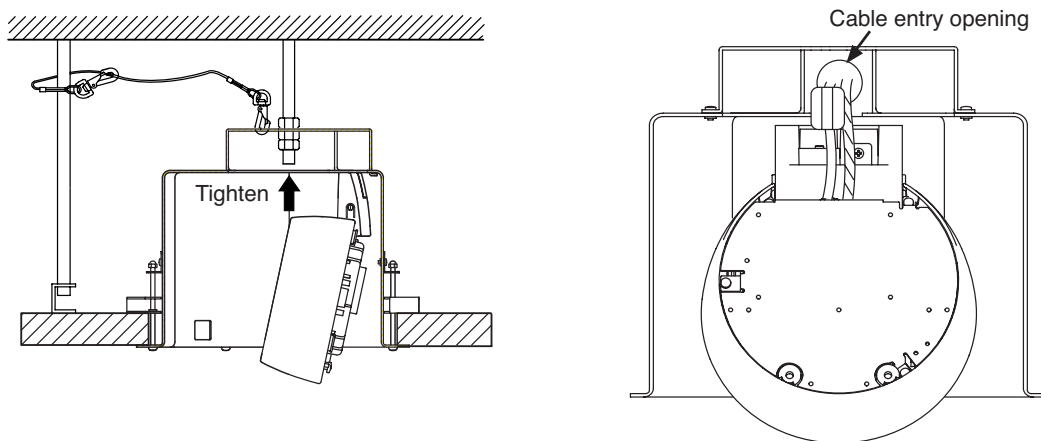
Note: Squeeze the cables after connection completion.

7. Place the flush ceiling mounting bracket in the ceiling behind the ceiling panel by inserting it through the mounting hole in the ceiling panel, then secure the bracket using the three supplied ceiling mounting screws.

Turning the mounting screws clockwise clamps the ceiling holding plate to the ceiling panel. Ensure that the notch in the bracket is pointing in the camera's intended direction.



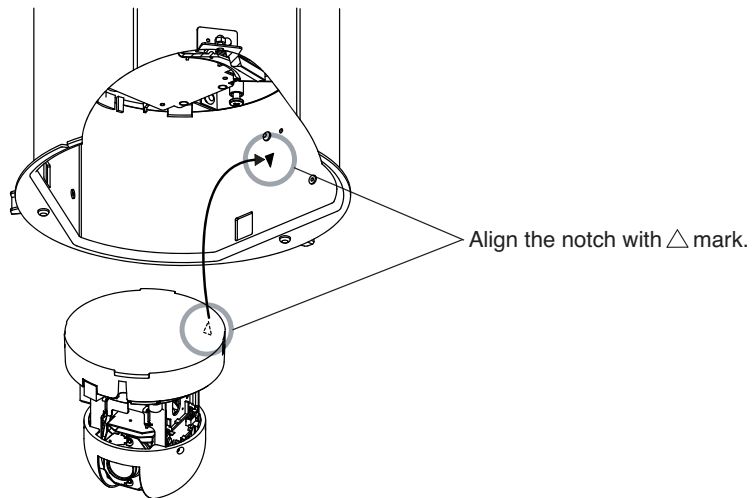
8. Fix the flush ceiling mounting bracket to the anchor bolt for flush ceiling mounting.



9. Perform steps 3 – 5 on p. 10 – 11.

Note: Squeeze the cables after connection completion.

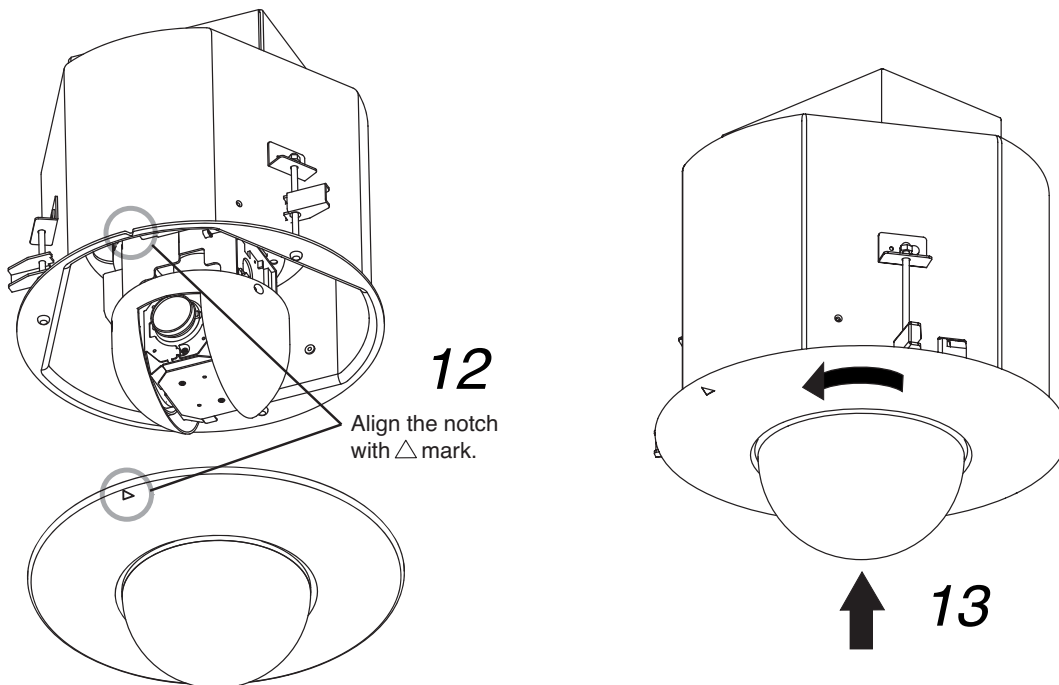
10. Attach the camera unit to the base unit.
Align the positioning mark on the camera unit with that on the flush ceiling mounting bracket.



11. Perform steps 7 – 9 on p. 12 – 13.

12. Align the positioning mark on the supplied dome cover with the notch in flush ceiling mounting bracket.

13. Turn the dome cover counterclockwise pushing it up to the flush ceiling mounting bracket until it locks into place.



11. CEILING SUSPENSION

Use the optional C-BC511P Ceiling Suspension Bracket in combination with the optional C-BC511C or C-BC511C-S Ceiling Mounting Cover when suspending the camera from a ceiling.

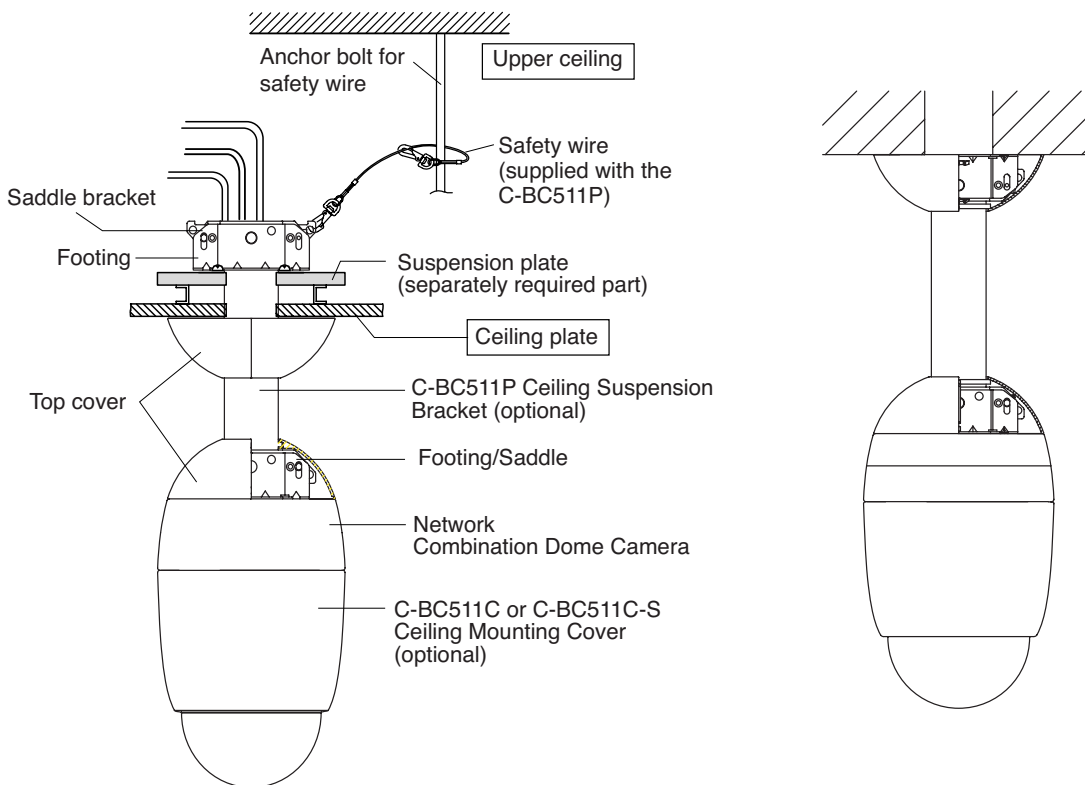
Notes

- Be sure to mount the ceiling suspension bracket using the supplied safety wire.
- Be sure to use the specified screws to mount the Network Combination Dome Camera and ceiling suspension bracket, and ensure that they are securely mounted without any play.

11.1. Mounting Example

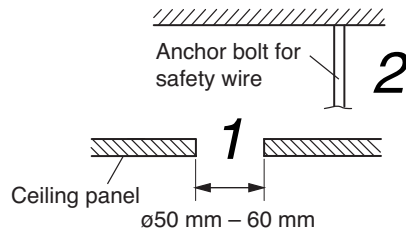
- When suspending the camera from a double-constructed ceiling

- When suspending the camera from the strong ceiling materials

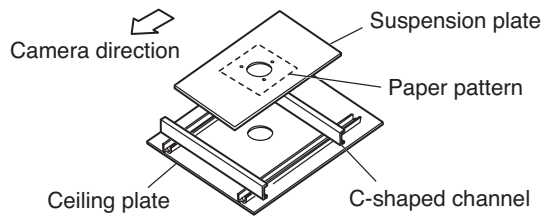


11.2. Mounting Procedures

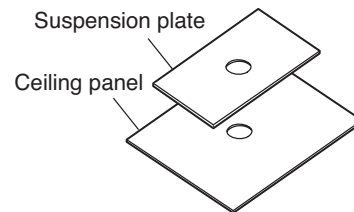
1. Determine the suspending position, then make a mounting hole of $\varnothing 50 - 60$ mm in the ceiling plate.
2. Install the anchor bolt for safety wire into the upper ceiling.
Note: If an existing anchor bolt is available nearby, it can be substituted for the anchor bolt for safety wire.
3. Separately prepare a suspension plate, and cut out the necessary hole in a way best suited to the plate material.



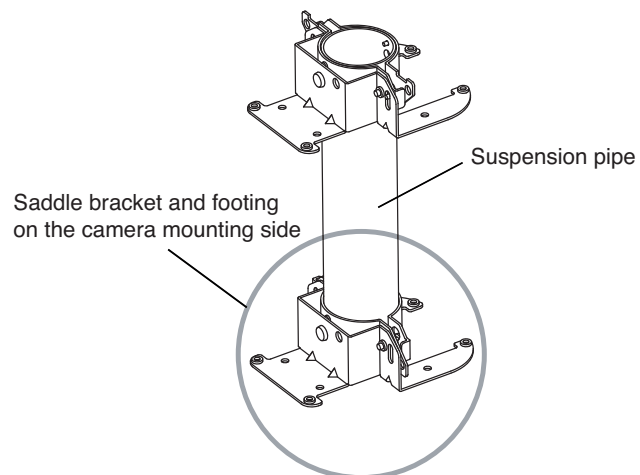
- For double-constructed ceilings



- For strong ceiling materials

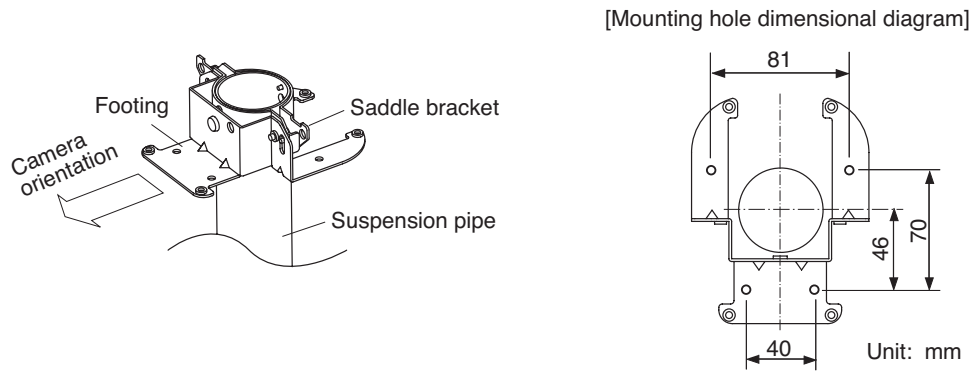


4. Detach footings and saddle bracket on the camera mounting side from the suspension pipe.
 - Removed saddle brackets and screws are attached to the suspension pipe in step 10.
 - Removed footings and screws are attached to the base unit in step 12.



5. Attach the suspension pipe (saddle bracket and footing) to the suspension plate.

Note: Ensure that the installed suspension pipe faces in the intended camera orientation.



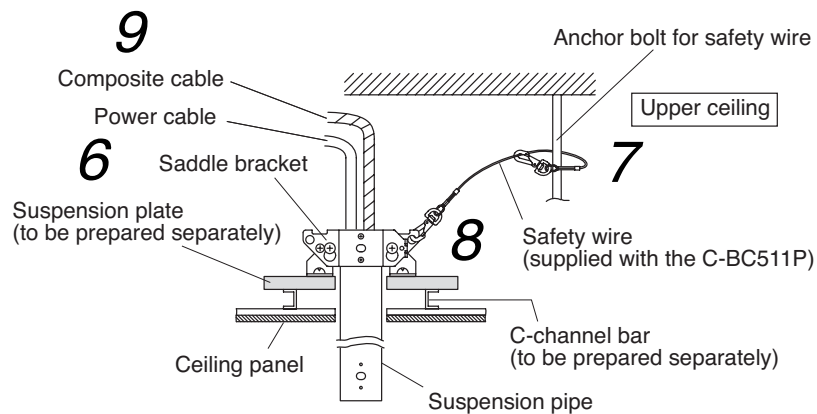
6. Install the suspension plate behind the ceiling panel.

- When installing in double-constructed ceilings:
Place the suspension plate across two C-channel bars with its hole aligned with the corresponding hole in the ceiling panel.
- When installing in strong ceiling materials:
Install the suspension plate with its hole aligned with the corresponding hole in the ceiling panel.

7. Attach the supplied safety wire to the anchor bolt for safety wire.

8. Attach the end of the safety wire to the saddle bracket of the suspension pipe.

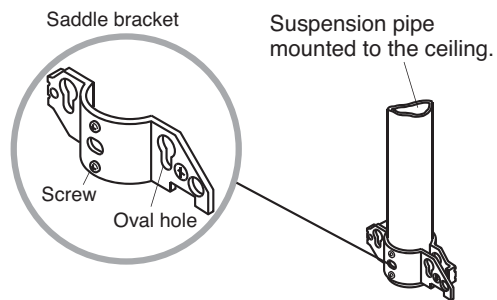
9. Run the composite cable and power cable extending from the ceiling through the pipe.



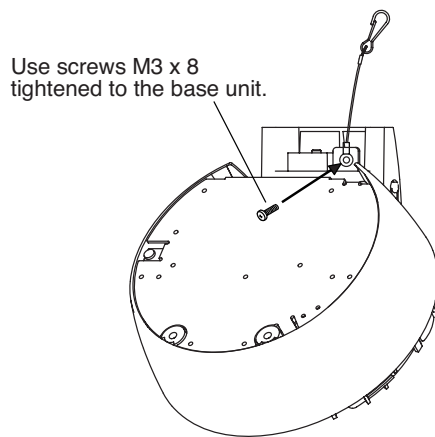
10. Attach two saddle brackets to the suspension pipe.

- Align the screw installed in the saddle bracket with the hole in the pipe.
- Attach the saddle bracket so that the orientation of its oval holes is as shown in the figure.

Note: Ensure that the saddle brackets are securely fixed without any play.

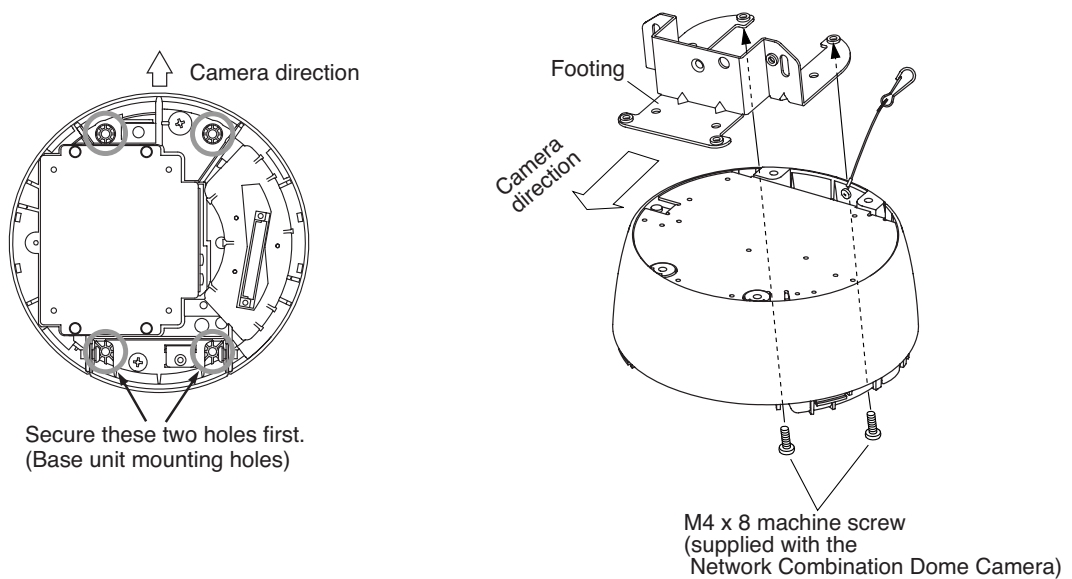


11. Attach the supplied safety wire to the base unit.

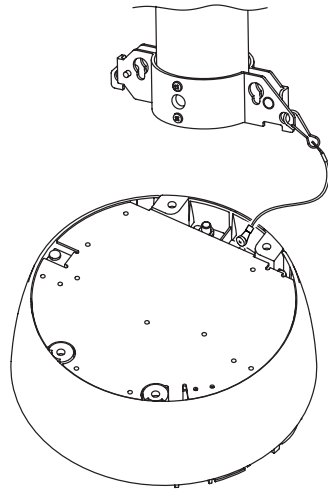


12. Attach removed footings to the base unit.

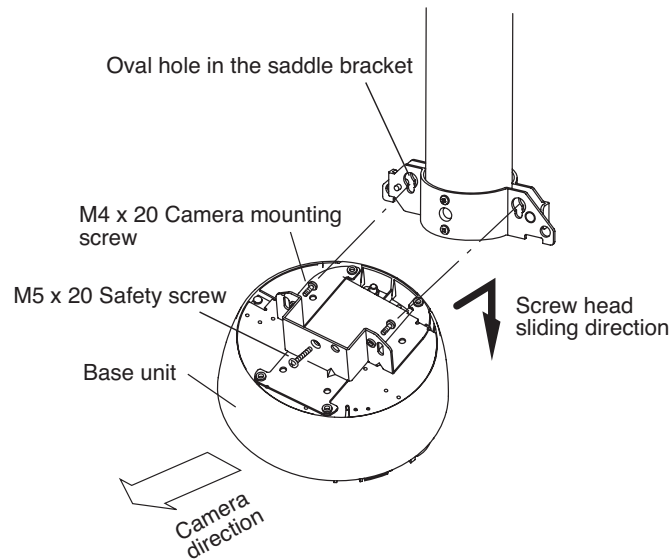
- First fix two of the base unit mounting holes as shown below.
- Use the screws supplied with the Network Combination Dome Camera.



13. Attach the safety wire attached to the base unit to the saddle bracket of the suspension pipe.



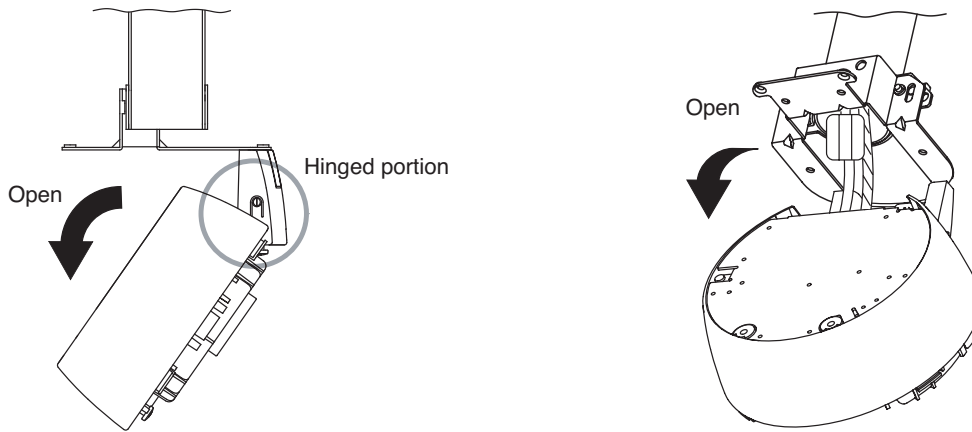
14. Attach the base unit (with footing) to the suspension pipe.



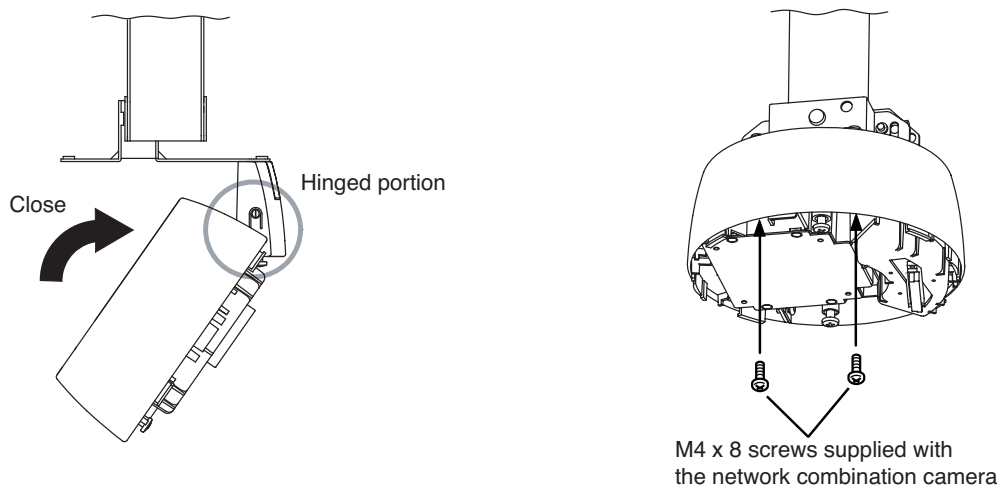
- Run the camera mounting screw head (2 screws) through the oval hole in the saddle bracket, and slide it in the direction indicated by the arrow, then tighten the camera mounting screws.
- Tighten the safety screw and run its screw tip through the round hole in the saddle bracket.

Note: Ensure that camera mounting screws and safety screw are securely tightened.

15. Release the lock on the hinged portion of the base unit and connect the power and composite cables to the base unit. (For details, please refer to p. 30; "CONNECTIONS.")

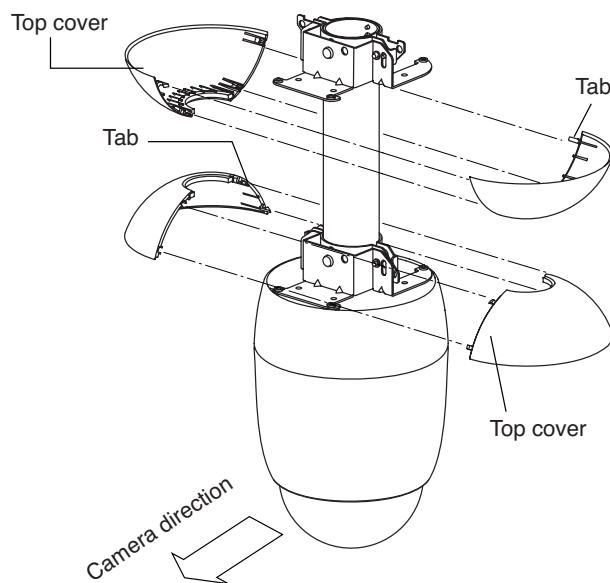


16. Lock the hinged portion of the base unit and secure the remaining two mounting holes.



17. Perform steps 4 – 11 on p. 11 – 13.

18. Mount the top cover by inserting the tabs of one half of the cover into the slots of the other half.



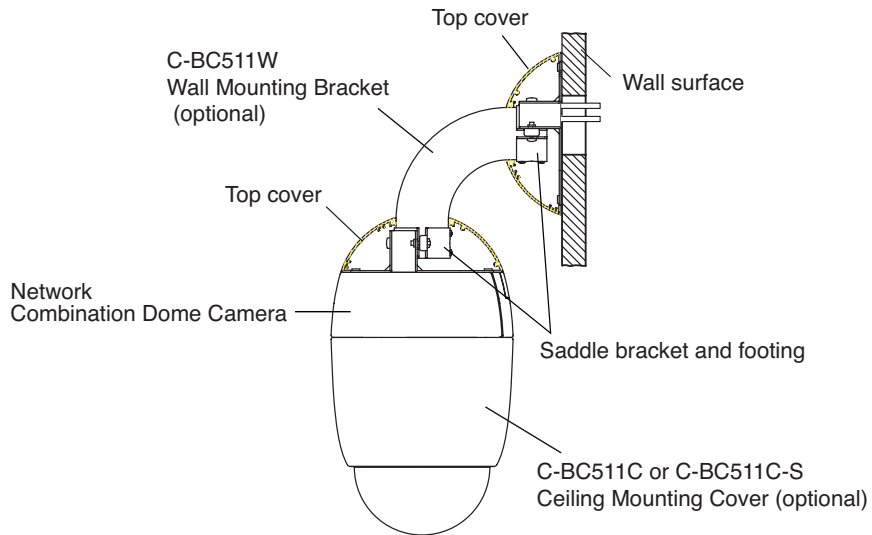
12. WALL MOUNTING

Use the optional C-BC511W Wall Mounting Bracket and optional C-BC511C or C-BC511C-S, Ceiling Mounting Cover.

Note

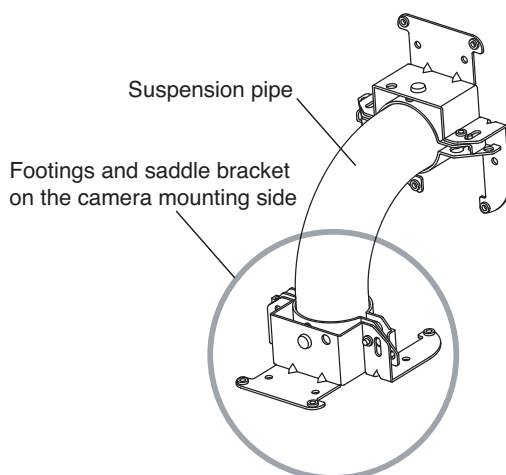
Be sure to use the specified screws to mount the Network Combination Dome Camera and wall mounting bracket, and ensure that they are securely mounted without any play.

12.1. Mounting Example

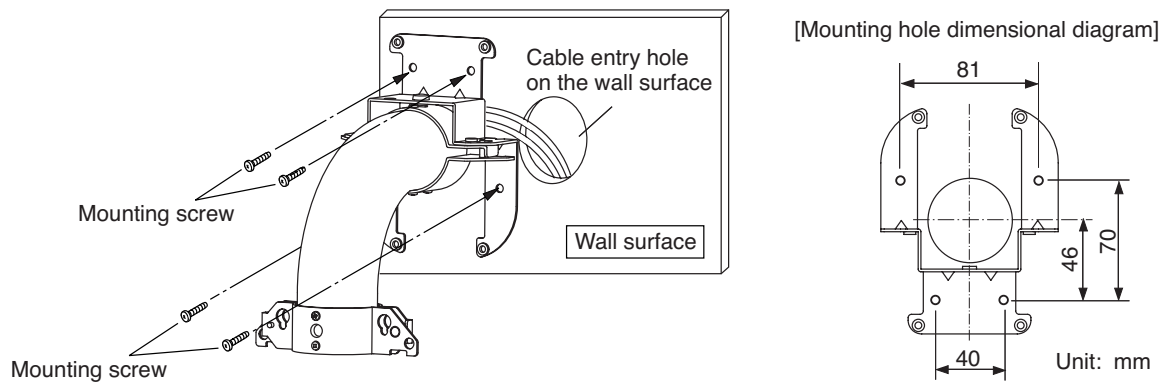


12.2. Mounting Procedures

1. Determine the mounting position, then make a mounting hole of $\varnothing 50 - 60$ mm on a wall.
2. Detach footings on the camera mounting side from the suspension pipe.
Removed footings and screws are attached to the base unit later. (refer to p. 24)



3. Mount the suspension pipe (with saddle bracket and footings) on a wall.

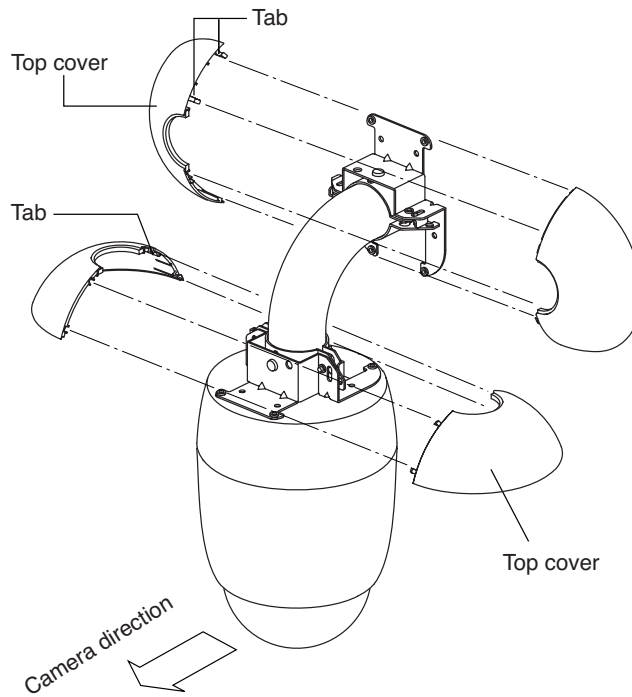


Notes

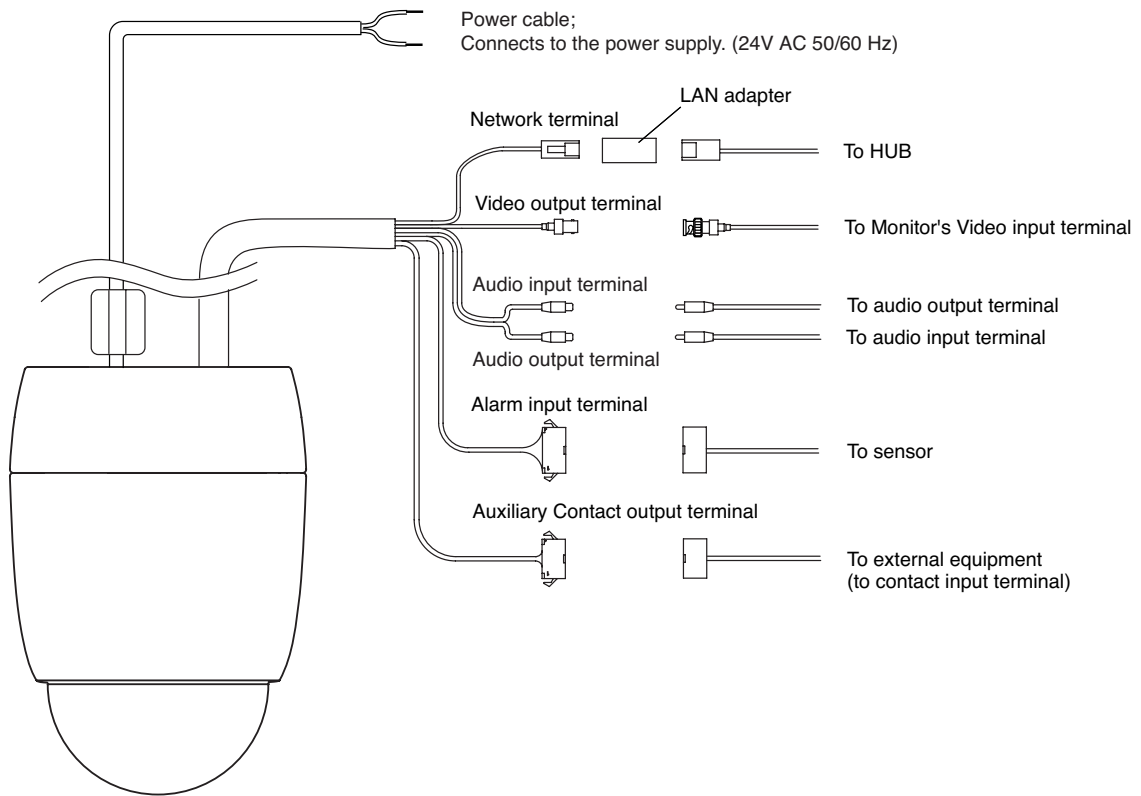
- Since no mounting screws are supplied with the camera, prepare them separately.
- Use screws with a nominal diameter of 4 mm.

4. Perform steps 11 – 16 on p. 25 – 27.

5. Attach the top cover. Insert one top cover's clicks into the other top cover's slots.
Mount the top cover by inserting the tabs of one half of the cover into the slots of the other half.



13. CONNECTIONS

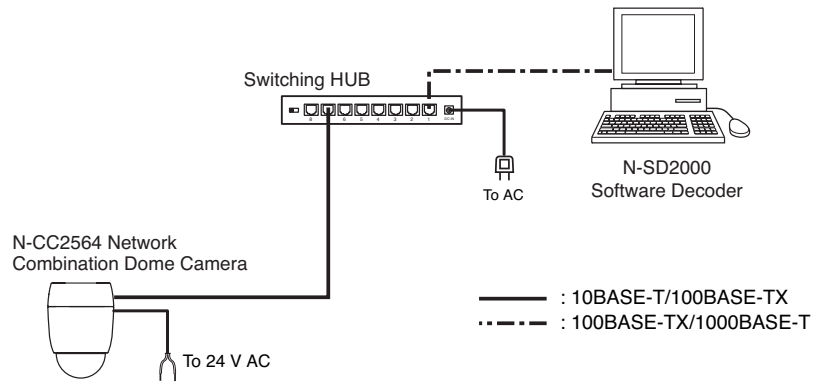


Terminal No.	Alarm input terminal
(1)	Alarm1
(2)	Alarm2
(3)	Alarm3
(4)	Alarm4
(5)	Alarm5
(6)	Alarm6
(7)	Alarm7
(8)	Alarm8
(9)	GND

Terminal No.	Auxiliary Contact output terminal
(1)	AUX N1
(2)	AUX N2
(3)	AUX2 (NO)
(4)	AUX2 (COM)
(5)	AUX2 (NC)
(6)	AUX1
(7)	COM

13.1. Connection example

Connections to the network system differ depending on the devices to be used. For details, refer to the descriptions about system examples in the setup manual.



Note: Shielded (STP) network cables must be used with this unit to ensure compliance with EMC standards.

14. INITIALIZATION

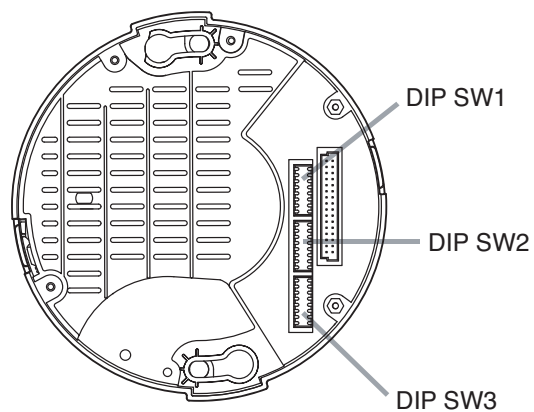
Return the set contents to default conditions.

1. Either press the RESET switch or switch on the power again while holding down the INITIALIZE switch.
2. Continue to press the INITIALIZE switch until the Ready indicator on the switching hub lights.

Note

To return the camera settings to default conditions, execute it in the camera menu screen. For details, refer to the setting manual.

14.1. DIP Switch Settings



	DIP SW1	DIP SW2	DIP SW3
No.1	Unused (ON)	Communication speed setting switch 1	Camera Unit Firmware update switch 1
No.2	Unused (OFF)	Communication speed setting switch 2	Camera Unit Firmware update switch 2
No.3	Unused (OFF)	OSD switch	Camera Unit Firmware update switch 3
No.4	Unused (OFF)	Unused (OFF)	Unused (OFF)
No.5	Unused (OFF)	Unused (OFF)	Unused (OFF)
No.6	Unused (OFF)	Unused (ON)	Unused (OFF)
No.7	Unused (OFF)	Unused (OFF)	Memory clear switch
No.8	Unused (OFF)	Unused (OFF)	Unused (OFF)

Note: If the DIP switches are not set correctly, the camera does not operate correctly.

14.1.1. Communication Speed Setting Switch (DIP switch 2: No. 1 – 2)

Avoid changing the default settings. ("38,400 bps" is the default.)

No.1	No.2	bps
OFF	OFF	38,400
ON	OFF	19,200
OFF	ON	9,600
ON	ON	4,800

14.1.2. OSD Switch (DIP switch 2: No. 3)

When this switch is set to the OFF position, the initial screen does not disappear until communications with other equipment are established following initial operation after the power has been switched ON.
(Factory setting: OFF)

14.1.3. Camera Unit Firmware Update Switch (DIP switch 3 No. 1 – 3)

For details, refer to the Camera Controller Software Operation Manual.
The Camera Controller Software Operation Manual and Installation Guide are made available on the TOA product data download site (<http://www.toa-products.com/international/>).

14.1.4. Memory Clear Switch (DIP switch 3: No. 7)

Switching on the power with this switch set to the ON position returns all camera settings to the initial setting. The indication "Memory Clear" is displayed on the screen while clearing memory. After the indication has disappeared, turn off the power and set the switch to the OFF position.

Note: Clock information and backup data are not erased.

15. TROUBLESHOOTING

Symptom	Possible Cause	Remedy
Camera does not start. (Ready LED does not light.)	Power is not supplied.	Supply power to the camera.
LINK/ACT LED does not light.	Cable is not correctly connected to the unit's network terminal.	Confirm that the cable type (category, null modem or straight) is appropriate for the connected port, then connect correctly.

16. SPECIFICATIONS

[N-CC2564 CU]

* 0 dB = 1V

Power Source	24 V AC, 50/60 Hz
Power Consumption	20 W (normal operation), 25 W max. (1.6 A max.)
Video Output	VBS 1.0 V(p-p), 75 Ω , BNC-R jack, NTSC
Audio Input	1 channel, -10 dB*, 10 k Ω , unbalanced, RCA pin jack
Audio Output	1 channel, -10 dB*, low impedance, unbalanced, RCA pin jack
Alarm Input	8 channels, no-voltage make contact input, open voltage: 9 V DC, short-circuit current: Under 10 mA (settable alarm action)
Auxiliary Contact Output	3 channels: Open collector output, withstand voltage: 30 V DC, permissible current: Under 50 mA, 1 channel: Relay contact output, permissible voltage: 30 V DC, permissible current: Under 1 A
Camera	
Image Device	1/4 type CCD
Resolution	Horizontal: 480 lines (at center)
S/N Ratio	50 dB
Synchronization	Internal synchronization/Power synchronization (phase adjustable when in power synchronization mode)
Minimum Required Illumination	High-sensitivity function OFF: 3 lx (50 IRE), 1 lx (20 IRE) High-sensitivity function ON: 0.03 lx (50 IRE), 0.01 lx (20 IRE)
Backlight Compensation	WIDE DYNAMIC/ Pattern1/ Pattern2/ Pattern3/ OFF
Dynamic Range	46 dB (backlight compensation: WIDE DYNAMIC operation)
High-Sensitivity Function	B/W mode and slow shutter mode (32 times max.)
White Balance	ATW/ AWB
Flicker Reduction	Automatic correction
ID	8 characters (alphanumeric and symbols) Camera, Position, Trace, Auto-pan, Tour, Home, Alarm, Sector, AUX
No. of Preset Positions	255 positions + Home
Automatic Operation	Auto-pan, Preset sequence, Auto-trace (2 preset patterns (60 s)), Tour (16 preset patterns)
Timer	Refresh: Starts at the preset time every day or every week by timer settings Program: Settable 16 actions
Other Function	Auto flip, Freeze preset, Manual limit, Privacy masking (up to 8), Motion detection (each 8 presets at each 4 positions)
Lens	
Electronic Zooming	12 x zooming
Auto-Focus	One push/ stop AF/ continuous
Zooming	23 x
Effective Focal Length	f = 3.6 – 82.8 mm (23 x)
Effective Angle of View	Horizontal: 54° (W) – 2.5° (T), Vertical: 41.6° (W) – 1.9° (T)
Maximum Aperture	F 1.6 (W) – F 3.7 (T)
Zoom Speed	WIDE end to TELE end Approx. 1.5 s (preset operation), Approx. 2.9 s (manual operation)
Pan/Tilt Head	
Rotating Range	Panning: Endless 360° rotation, Tilting: +5° to -185°
Rotating Speed	Panning/Tilting: 360°/s max. (preset operation), 360°/s max. (manual operation)

Network	
Network I/F	10BASE-T/100BASE-TX, Auto-Nego/Manual: RJ45 connector
Network Protocol	TCP, UDP, SIP, RTP, IGMP, HTTP, ARP, DHCP, DNS, SNTP, FTP, SMTP
Video Compression/ Resolution	MPEG-4: D1 (720 x 480), Half D1 (720 x 240), QVGA (320 x 240) JPEG: D1 (720 x 480), Half D1 (720 x 240), VGA (640 x 480), QVGA (320 x 240), QQVGA (160 x 120)
Frame Rate	MPEG-4: (D1, max. 30 fps) + JPEG (D1, max. 5 fps)
Audio Compression/ Decompression	Sub-band ADPCM, PCM (non-compression)
Audio Sampling Frequency	8 kHz, 32 kHz
Image Transfer Rate	MPEG-4: max. 4 Mbps
Simultaneous Connected Number	5 (MPEG-4: 4, JPEG: 1), When streaming mode is set: No limit (MPEG-4 only)
Operating Temperature	-10°C to +50°C (continuously active for operation at temperature below 0°C) 14°F to 122°F (continuously active for operation at temperature below 32°F)
Operating Humidity	Under 90% RH (no condensation)
Application	Indoor use
Finish	Base: PC/ABS resin, cool gray Camera: PC/ABS resin, black
Dimensions	ø168 x 234 (H) mm (ø 6.61" x 9.21")
Weight	2 kg (4.41 lb)

Note: The design and specifications are subject to change without notice for improvement.

Power Source	24 V AC, 50/60 Hz
Power Consumption	20 W (normal operation), 25 W max. (1.6 A max.)
Video Output	VBS 1.0 V(p-p), 75 Ω , BNC-R jack, PAL
Audio Input	1 channel, -10 dB*, 10 k Ω , unbalanced, RCA pin jack
Audio Output	1 channel, -10 dB*, low impedance, unbalanced, RCA pin jack
Alarm Input	8 channels, no-voltage make contact input, open voltage: 9 V DC, short-circuit current: Under 10 mA (settable alarm action)
Auxiliary Contact Output	3 channels: Open collector output, withstand voltage: 30 V DC, permissible current: Under 50 mA, 1 channel: Relay contact output, permissible voltage: 30 V DC, permissible current: Under 1 A
Camera	
Image Device	1/4 type CCD
Resolution	Horizontal: 480 lines (at center)
S/N Ratio	50 dB
Synchronization	Internal synchronization/Power synchronization (phase adjustable when in power synchronization mode)
Minimum Required Illumination	High-sensitivity function OFF: 3 lx (350 mV), 1 lx (140 mV) High-sensitivity function ON: 0.03 lx (350 mV), 0.01 lx (140 mV)
Backlight Compensation	WIDE DYNAMIC/ Pattern1/ Pattern2/ Pattern3/ OFF
Dynamic Range	46 dB (backlight compensation: WIDE DYNAMIC operation)
High-Sensitivity Function	B/W mode and slow shutter mode (32 times max.)
White Balance	ATW/ AWB
Flicker Reduction	Automatic correction
ID	8 characters (alphanumeric and symbols) Camera, Position, Trace, Auto-pan, Tour, Home, Alarm, Sector, AUX
No. of Preset Positions	255 positions + Home
Automatic Operation	Auto-pan, Preset sequence, Auto-trace (2 preset patterns (60 s)), Tour (16 preset patterns)
Timer	Refresh: Starts at the preset time every day or every week by timer settings Program: Settable 16 actions
Other Function	Auto flip, Freeze preset, Manual limit, Privacy masking (up to 8), Motion detection (each 8 presets at each 4 positions)
Lens	
Electronic Zooming	12 x zooming
Auto-Focus	One push/ stop AF/ continuous
Zooming	23 x
Effective Focal Length	f = 3.6 – 82.8 mm (23 x)
Effective Angle of View	Horizontal: 54° (W) – 2.5° (T), Vertical: 41.6° (W) – 1.9° (T)
Maximum Aperture	F 1.6 (W) – F 3.7 (T)
Zoom Speed	WIDE end to TELE end Approx. 1.5 s (preset operation), Approx. 2.9 s (manual operation)
Pan/Tilt Head	
Rotating Range	Panning: Endless 360° rotation, Tilting: +5° to -185°
Rotating Speed	Panning/Tilting: 360°/s max. (preset operation), 360°/s max. (manual operation)

Network	
Network I/F	10BASE-T/100BASE-TX, Auto-Nego/Manual: RJ45 connector
Network Protocol	TCP, UDP, SIP, RTP, IGMP, HTTP, ARP, DHCP, DNS, SNTP, FTP, SMTP
Video Compression/ Resolution	MPEG-4: D1 (720 x 576), Half D1 (720 x 288), CIF (352 x 288) JPEG: D1 (720 x 576), Half D1 (720 x 288), CIF (352 x 288), VGA (640 x 480), QVGA (320 x 240), QQVGA (160 x 120)
Frame Rate	MPEG-4: (D1, max. 25 fps) + JPEG (D1, max. 5 fps)
Audio Compression/ Decompression	Sub-band ADPCM, PCM (non-compression)
Audio Sampling Frequency	8 kHz, 32 kHz
Image Transfer Rate	MPEG-4: max. 4 Mbps
Simultaneous Connected Number	5 (MPEG-4: 4, JPEG: 1), When streaming mode is set: No limit (MPEG-4 only)
Operating Temperature	-10°C to +50°C (continuously active for operation at temperature below 0°C) 14°F to 122°F (continuously active for operation at temperature below 32°F)
Operating Humidity	Under 90% RH (no condensation)
Application	Indoor use
Finish	Base: PC/ABS resin, cool gray Camera: PC/ABS resin, black
Dimensions	ø168 x 234 (H) mm (ø 6.61" x 9.21")
Weight	2 kg (4.41 lb)

Note: The design and specifications are subject to change without notice for improvement.

• **System Requirements (for Software decoder)**

Personal Computer	PC/AT compatible
Main Specifications	CPU: Pentium4, over 3 GHz Memory: Over 512 MB Display adapter: XGA (1024 x 768 pixels), Intel Chipset (Recommended) Usable on DirectX 9.0a or later Sound controller: Usable over DirectX 9.0a or later Network adapter: Over 100BASE-TX
OS	Windows XP Professional
Required Web Browser	Internet Explorer 6.0 or later

Notes

- Pentium and Intel are trademark of Intel Corporation.
- Windows is a trademark of Microsoft Corporation.

• **Optional products**

Ceiling Mounting Cover:	C-BC511C/ C-BC511C-S
Flush Ceiling Mounting Bracket:	C-BC511U/ C-BC511U-S
Ceiling Suspension Bracket:	C-BC511P
Wall Mounting Bracket:	C-BC511W
Ceiling Mounting Bracket:	C-BC511A

